# Product data sheet

Specifications

## servo motor BSH, Lexium 15, 0.5N.m, 4000rpm, 55mm, untapped shaft, Sincos multi turn, with brake, IP50

BSH0551P02F2A

**Product availability: Non-Stock - Not normally stocked in distribution facility**

**Price*: 1,375.00 USD**

## Main

| | |
|---|---|
| **Product Or Component Type** | Servo motor |
| **Device Short Name** | BSH |
| **Maximum Mechanical Speed** | 9000 rpm |
| **Continuous Stall Torque** | 4.43 lbf.in (0.5 N.m) LXM32.U60N4 1.5 A, 400 V, three phase<br>4.43 lbf.in (0.5 N.m) LXM32.U60N4 1.5 A, 480 V, three phase<br>4.43 lbf.in (0.5 N.m) LXM15LD13M3, 230 V, single phase<br>4.43 lbf.in (0.5 N.m) LXM15LU60N4, 230 V, three phase |
| **Peak Stall Torque** | 13.28 lbf.in (1.5 N.m) LXM32.U60N4 1.5 A, 400 V, three phase<br>13.28 lbf.in (1.5 N.m) LXM32.U60N4 1.5 A, 480 V, three phase<br>12.39 lbf.in (1.4 N.m) LXM15LD13M3, 230 V, single phase<br>12.39 lbf.in (1.4 N.m) LXM15LU60N4, 230 V, three phase |
| **Nominal Output Power** | 300 W LXM32.U60N4 1.5 A, 400 V, three phase<br>300 W LXM32.U60N4 1.5 A, 480 V, three phase<br>170 W LXM15LD13M3, 230 V, single phase<br>170 W LXM15LU60N4, 230 V, three phase |
| **Nominal Torque** | 4.25 lbf.in (0.48 N.m) LXM32.U60N4 1.5 A, 400 V, three phase<br>4.25 lbf.in (0.48 N.m) LXM32.U60N4 1.5 A, 480 V, three phase<br>4.07 lbf.in (0.46 N.m) LXM15LD13M3, 230 V, single phase<br>4.07 lbf.in (0.46 N.m) LXM15LU60N4, 230 V, three phase |
| **Nominal Speed** | 6000 rpm LXM32.U60N4 1.5 A, 400 V, three phase<br>6000 rpm LXM32.U60N4 1.5 A, 480 V, three phase<br>4000 rpm LXM15LD13M3, 230 V, single phase<br>4000 rpm LXM15LU60N4, 230 V, three phase |
| **Product Compatibility** | LXM15LD13M3 230 V single phase<br>LXM15LU60N4 230 V three phase<br>LXM32.U60N4 400 V three phase<br>LXM32.U60N4 480 V three phase |
| **Shaft End** | Untapped |
| **Ip Degree Of Protection** | IP50 standard |
| **Speed Feedback Resolution** | 131072 points/turn x 4096 turns |
| **Holding Brake** | With |
| **Mounting Support** | International standard flange |
| **Electrical Connection** | Rotatable right-angled connectors |

## Complementary

| | |
|---|---|
| **Range Compatibility** | Lexium 32<br>Lexium 15 |
| **Supply Voltage Max** | 480 V |

Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

| | |
|---|---|
| **Phase** | Three phase |
| **Continuous Stall Current** | 0.73 A |
| **Maximum Continuous Power** | 0.45 W |
| **Maximum Current Irms** | 3.5 A LXM15LD13M3<br>3.5 A LXM15LU60N4<br>2.9 A LXM32.U60N4 |
| **Maximum Permanent Current** | 2.9 A |
| **Switching Frequency** | 8 kHz |
| **Second Shaft** | Without second shaft end |
| **Shaft Diameter** | 0.35 in (9 mm) |
| **Shaft Length** | 0.79 in (20 mm) |
| **Feedback Type** | Multiturn SinCos Hiperface |
| **Holding Torque** | 7.08 lbf.in (0.8 N.m) holding brake |
| **Motor Flange Size** | 2.17 in (55 mm) |
| **Number Of Motor Stacks** | 1 |
| **Torque Constant** | 0.7 N.m/A 248 °F (120 °C) |
| **Back Emf Constant** | 40 V/krpm 248 °F (120 °C) |
| **Number Of Motor Poles** | 6 |
| **Rotor Inertia** | 0.083 kg.cm² |
| **Stator Resistance** | 41.8 Ohm 68 °F (20 °C) |
| **Stator Inductance** | 71.5 mH 68 °F (20 °C) |
| **Stator Electrical Time Constant** | 1.09 ms 68 °F (20 °C) |
| **Maximum Radial Force Fr** | 170 N 8000 rpm<br>180 N 7000 rpm<br>190 N 6000 rpm<br>200 N 5000 rpm<br>220 N 4000 rpm<br>240 N 3000 rpm<br>270 N 2000 rpm<br>340 N 1000 rpm |
| **Maximum Axial Force Fa** | 0.2 x Fr |
| **Brake Pull-In Power** | 10 W |
| **Type Of Cooling** | Natural convection |
| **Length** | 6.26 in (159 mm) |
| **Centring Collar Diameter** | 1.57 in (40 mm) |
| **Centring Collar Depth** | 0.08 in (2 mm) |
| **Number Of Mounting Holes** | 4 |
| **Mounting Holes Diameter** | 0.22 in (5.5 mm) |
| **Circle Diameter Of The Mounting Holes** | 2.48 in (63 mm) |
| **Net Weight** | 2.87 lb(US) (1.3 kg) |

## Ordering and shipping details

| | |
|---|---|
| **Category** | US1PC5318282 |
| **Discount Schedule** | PC53 |
| **Gtin** | 3389118198579 |

| | |
|---|---|
| **Returnability** | No |
| **Country Of Origin** | DE |

## Packing Units

| | |
|---|---|
| **Unit Type Of Package 1** | PCE |
| **Number Of Units In Package 1** | 1 |
| **Package 1 Height** | 4.53 in (11.5 cm) |
| **Package 1 Width** | 7.48 in (19.0 cm) |
| **Package 1 Length** | 15.55 in (39.5 cm) |
| **Package 1 Weight** | 3.75 lb(US) (1.7 kg) |

## Contractual warranty

| | |
|---|---|
| **Warranty** | 18 months |

## Sustainability

**Green Premium™ label** is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-$CO_2$ products.

**Guide to assessing product sustainability** is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

Learn more about Green Premium >

Guide to assess a product's sustainability >

Transparency RoHS/REACh

## Well-being performance

| | |
|---|---|
| Mercury Free | |
| Rohs Exemption Information | Yes |
| Pvc Free | |

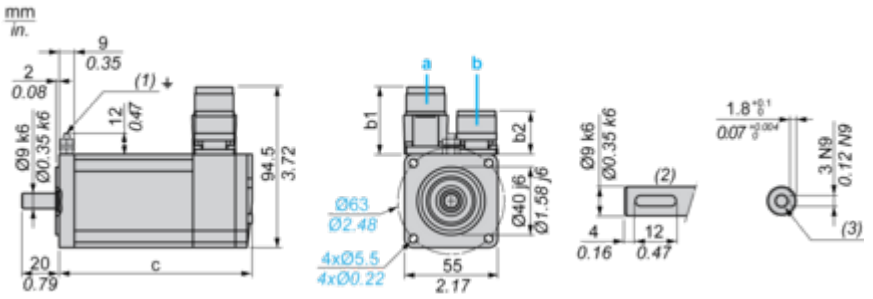
## Certifications & Standards

| | |
|---|---|
| **Reach Regulation** | REACh Declaration |
| **Eu Rohs Directive** | Pro-active compliance (Product out of EU RoHS legal scope) |
| **China Rohs Regulation** | China RoHS declaration |
| **Environmental Disclosure** | Product Environmental Profile |
| **Weee** | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins. |
| **Circularity Profile** | No need of specific recycling operations |
| **California Proposition 65** | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov |

## Dimensions Drawings

### Servo Motors Dimensions

#### Example with Straight Connectors




**a:** Power supply for servo motor brake
**b:** Power supply for servo motor encoder
**(1)** M4 screw
**(2)** Shaft end, keyed slot (optional)
**(3)** For screw M3 x 9 mm/M3 x 0.35 in.

Dimensions in mm

| Straight connectors | | Rotatable angled connectors | | c (without brake) | c (with brake) |
|---|---|---|---|---|---|
| b | b1 | b | b1 | | |
| 39.5 | 25.5 | 39.5 | 39.5 | 132.5 | 159 |

Dimensions in in.

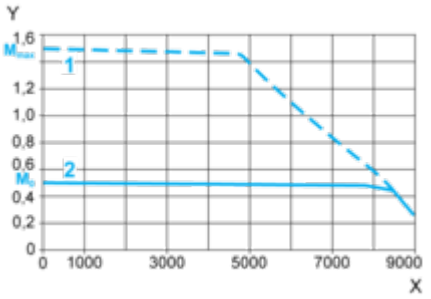
| Straight connectors | | Rotatable angled connectors | | c (without brake) | c (with brake) |
|---|---|---|---|---|---|
| b | b1 | b | b1 | | |
| 1.55 | 1.00 | 1.55 | 1.55 | 5.21 | 6.25 |

## Performance Curves

### 400 V 3-Phase Supply Voltage

### Torque/Speed Curves

**Servo motor with LXM32•U60N4 servo drive**

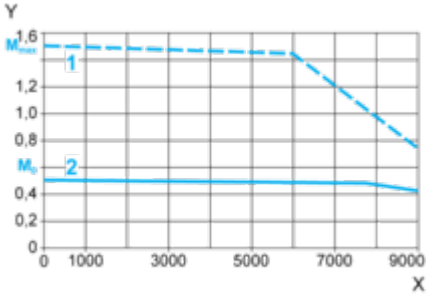



**X** Speed in rpm
**Y** Torque in Nm
**1** Peak torque
**2** Continuous torque

## 480 V 3-Phase Supply Voltage

### Torque/Speed Curves

**Servo motor with LXM32•U60N4 servo drive**




**X** Speed in rpm
**Y** Torque in Nm
**1** Peak torque
**2** Continuous torque